



Smart Coatings and Multifunctional Materials: Technologies and Applications (SC-6690-V)

Smart/Multifunctional and sustainable materials are the most recent global trends in materials and coating technologies. Smart materials and coatings have evolved to answer an increasing demand for advanced materials and coatings that can sense their environment and perform multifunctional tasks. These coatings not only function as protective and decorative materials, but also push the performance envelope well beyond the traditional expectations of coatings.

Included in this class of material are stimuli responsive, self-healing, corrosion sensing, biologically active, self-stratifying, shape-memory materials and superhydrophobic/superhydrophilic coatings. These products find applications in medical and personal care, architectural, automotive, aerospace, and electronics industries – among many others. This course will focus on disruptive and novel approaches for creating innovative materials, and blueprints for developing technologies for smart and multifunctional materials and coatings.

WHO SHOULD ATTEND?

This interactive training is highly recommended for material/coating product designers, disruptive/novel technology development officers, development managers, researchers, formulators, and scientists at all levels in industry and academia. It is specifically recommended for individuals and organizations that are seeking to broaden their skills and product portfolios.

WHAT YOU WILL LEARN:

- Gain in-depth knowledge of the technologies of Smart Materials and their properties.
- Become familiar with enabling tools, smart product ideas and opportunities.
- Learn *Rational Formulation* concepts leading to novel and lower cost products.
- Develop an overall understanding of creating multifunctionality in a product.
- Learn steps to developing stimuli responsive materials, and their applications.

Virtual Course Outline

- Global materials and coatings trends.
- The science and technology behind smart and multi-functional materials.
- Disruptive approaches and technologies.
- *Rational Formulation* concepts and applications.
- Stimuli responsive functionality and applications.
- The future of smart materials – outlook and opportunities.

Virtual Course Details

- The virtual course will be presented live via Zoom Media. Participants may attend from either home or office, and will require a computer with a microphone and webcam.
- Participants must attend 100% of all sessions to receive an electronic/printed certificate of completion.
- Scheduled course times are Eastern Standard Time (EST).

- Private questions/consulting sessions maybe scheduled by attendees during the designated hours.
- All training materials (slides) will be available for download.